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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,123	05/18/2001	Ursula Ziegler	1998/G-026	7064

23416 7590 10/24/2003

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EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

13

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A9-13

<b>Office Action Summary</b>	<b>Applicant(s)</b>	
	ZIEGLER ET AL.	
	<b>Application No.</b>	<b>Art Unit</b>
	09/806,123	1773
	<b>Examiner</b>	
	Monique R Jackson	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. The amendment filed 8/25/03 has been entered. Claims 1-12 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 112***

3. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "high-molecular weight styrene-olefin block copolymer" in line 7; however it is noted that the term "high-molecular weight" is a relative term which renders the claim indefinite. The term "high-molecular weight" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

#### ***Claim Rejections - 35 USC § 103***

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 837 097 A (EP'097) for the reasons recited in the prior office action and restated below.

EP'097 teaches a block copolymer compatibilizer comprising 5 to 95% thermoplastic polyurethane, copolyester or copolyamide, wherein the block copolymer thermoplastic provides improved adhesion of thermoplastic elastomers, such as styrene/ethylene/butene-block copolymers, to polar engineering resins such as polyacetals, by adding the thermoplastic compatibilizer to the thermoplastic elastomer in an amount of 1 to 40 weight percent based on the composition of the thermoplastic elastomer and block copolymer; hence the compatibilized

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composition comprising the styrene-olefin block copolymer comprises thermoplastic polyurethane, a non-olefinic thermoplastic material, within the ranges of the instantly claimed invention (Abstract; Page 7, line 54-Page 8, line 47.) EP'097 further teach that fillers can be added to blends such as lubricants and process aids in an amount of 0.05 to 50%, based on the total amount of the blend, depending on the nature of the additives themselves; and that the blends can be used in injection molding and extrusion molding applications (Page 8, lines 51-56.) EP'097 does not teach that styrene-olefin copolymer is "high" molecular weight, however, it is known in the art that molecular weight of an elastomer is a result-effective variable affecting the mechanical properties of the resulting elastomer including hardness and hence one skilled in the art would have been motivated to determine how "high" the molecular weight should be to produce the desired mechanical properties and the desired hardness for the instantly claimed invention. With regards to Claim 3, though EP'097 does teach that the adhesion is improved, EP'097 does not specifically teach that the bond strength is at least  $0.5\text{N/mm}^2$ . However, EP'097 further teach that additives may be incorporated into the blends and hence one skilled in the art at the time of the invention would have been motivated to incorporate adhesion promoting additives or determine the optimum amount of compatibilizer to utilize to provide the desired bond strength for a particular end use. With regards to Claim 4, though EP'097 does not specifically teach that the polyacetal is polyoxymethylene copolymer, given that EP'097 refers to injection molding, it would have been obvious to one having ordinary skill in the art to utilize any polyacetal polymer in the art wherein polyoxymethylene is a conventionally utilized polyacetal polymer in producing injection molded articles. With regards to the process limitations "multicomponent injection molding" and "injected" in the product claims, the

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Examiner takes the position that these process limitations do not materially affect the resulting product and hence the teachings of EP'097 as discussed above read on the instantly claimed product.

5. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 4434656 (DE'656) in view of EP'097 for the reasons recited in the prior office action and restated below.

DE'656 teaches a method of producing a composite part comprising a body made from a conventional plastic such as polyoxymethylene (a polyacetal) and a coating of injected, rubber-like material such as a styrene-olefin block copolymers like SBS or SEBS which have rigid end groups of styrene and flexible middle blocks of olefin, or other elastomer, or thermoplastic or polyurethane (Abstract; Claims 1-4; Col. 2, lines 23-45; Figure 1.) DE'656 does not teach that the rubber-like comprises a mixture of the styrene-olefin block copolymer and a non-olefin thermoplastic as instantly claimed. However, it would have been obvious to one skilled in the art at the time of the invention to utilize a mixture of any of the suitable coating materials taught by DE'656 including the styrene-olefin copolymers, polyurethanes and thermoplastics. Further, EP'097 teaches a block copolymer compatibilizer comprising 5 to 95% thermoplastic polyurethane, copolyester or copolyamide, wherein the block copolymer thermoplastic provides improved adhesion of thermoplastic elastomers, such as styrene/ethylene/butene-block copolymers, to polar engineering resins such as polyacetals, by adding the thermoplastic compatibilizer to the thermoplastic elastomer in an amount of 1 to 40 weight percent based on the composition of the thermoplastic elastomer and block copolymer; hence the compatibilized composition comprising the styrene-olefin block copolymer comprises thermoplastic

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polyurethane, a non-olefinic thermoplastic material, within the ranges of the instantly claimed invention; and further teaches that the compatibilized composition may be utilized in injection molding applications (Abstract; Page 7, line 54-Page 8, line 47.) With regards to the temperature limitation recited in Claims 11-12, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum temperature operating ranges based on the materials utilized to produce the desired injection molded part.

### ***Response to Arguments***

6. Applicant's arguments filed 8/25/03 have been fully considered but they are not persuasive. With regards to the rejection of the term "high-molecular weight" the Applicant refers the Examiner to two EP documents incorporated by reference to provide guidance for the term "high-molecular weight" as being within the range of from 20,000 to 350,000, however the Examiner notes that neither these documents nor the instant disclosure suggest equating the term "high-molecular weight" to a value within this recited range. It is also noted that there is no clear indication whether the term refers to "high" weight average molecular weight, number average molecular weight, etc. Therefore, the Examiner maintains that given the disclosure at the time of the invention, one having ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention and could not interpret the metes and bounds of the claim so as to understand how to avoid infringement.

7. With respect to the obviousness rejections, the Applicant first argues that EP'097 requires an additional block copolymer to achieve the improved compatibility or adhesion that is not necessary for the instant invention, however it is noted that the instant invention is drafted in

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open transition language and hence does not exclude the incorporation of other materials. The Applicant also argues that EP'097 does not provide any examples utilizing polyacetals and that EP'097 does teach or suggest a composite article made from polyacetals and a specific SEBS compound. However, as discussed above and noted by the Applicant on page 7 of the Remarks, EP'097 does in fact suggest a composite article with the SEBS elastomer blend adhered to polyacetal, even though the Examiner notes that no specific example is provided. Therefore, given that EP'097 clearly suggests adhering the SEBS elastomer blend to polyacetal, and given the absence of a showing of unexpected results, the Examiner maintains her position that the instant invention would have been obvious to one skilled in the art at the time of the invention.

8. In terms of the rejection over DE'656, the Applicant appears to argue the references individually as opposed to in combination as presented in the rejection. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

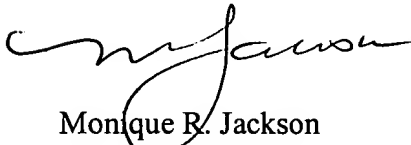
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Monique R. Jackson  
Primary Examiner  
Technology Center 1700  
October 22, 2003